



Data Quality Course



TRICARE
Management
Activity

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Objectives

By the end of this presentation, you will:

- Know the origin and goals of Six Sigma.
- Identify how Six Sigma is used in healthcare and other industries.
- Be able to navigate through the Six Sigma MEPRS Management Metrics (S2M3) tool.
- Understand how individual MTF characteristics can affect its position among its peer group/cohort.



Six Sigma

- *Six Sigma is a statistics based business improvement process that continually strives for perfection.*
- *It employs a disciplined methodology created from the manufacturing industry for eliminating the wastes of defects or variance to lower costs and improve customer satisfaction.*

Six Sigma Methodology for Improving Existing Processes

DMAIC

- **Define Opportunities**
- **Measure Performance**
- **Analyze Opportunity**
- **Improve Performance**
- **Control Performance**



Six Sigma in Healthcare:

- DSI, a medical reference and toxicology laboratory improved turnaround time by 54% and cut costs by \$250,000 per year.
- Avera McKennan Hospital Emergency Department cut patient turnaround time by 29% and saved \$1.25 million in avoided construction costs.

Six Sigma in Other Industries:

- Bank of America has used Six Sigma for credit risk assessment reduction, fraud prevention, and customer satisfaction improvement.
- In Engineering and Construction, on the Channel Tunnel Rail Link project in the UK, Bechtel's project team uncovered a way to save hundreds of job hours on one of the tunneling jobs.



Six Sigma MEPRS Management Metrics (S2M3)

FY04 / 05 Update: Last Six Months of FY04 and 1st Six Months of FY05

All data obtained from the EAS IV Repository and M2 in July 2005



Click on a peer group below to view a specific metric:

| Rx Dispensing Costs | Available FTE's per Daily Occupied Bed | Ratio of Support Personnel to Provider FTEs | Rx Workload per Rx FTE | Lab Workload per Lab FTE * | Rad Workload per Rad FTE | Inpatient Costs per RWP | Ambulatory Costs per APG |
|---------------------|--|---|------------------------|----------------------------|--------------------------|-------------------------|--------------------------|
| Medical Centers | Medical Centers | Medical Centers | Medical Centers | Medical Centers | Medical Centers | Medical Centers | Medical Centers |
| Large Hospitals | Large Hospitals | Large Hospitals | Large Hospitals | Large Hospitals | Large Hospitals | Large Hospitals | Large Hospitals |
| Small Hospitals | Small Hospitals | Small Hospitals | Small Hospitals | Small Hospitals | Small Hospitals | Small Hospitals | Small Hospitals |
| Large Clinics | Large Clinics | Large Clinics | Large Clinics | Large Clinics | Large Clinics | | Large Clinics |
| Small Clinics | Small Clinics | Small Clinics | Small Clinics | Small Clinics | Small Clinics | | Small Clinics |

*Because there was a significant change in MHS Relative Value Units (RVUs) in EAS IV between CY04 and CY05, CY05 RVUs were applied to the raw workload for the entire analysis period.

Executive Summary:

[Medical Centers](#)
[Large Hospitals](#)
[Small Hospitals](#)
[Large Clinics](#)
[Small Clinics](#)

Notes:

[Six Sigma Description](#)
[Definition of Metrics](#)
[Data Sources](#)
[Peer Group Definitions](#)

External MEPRS Resources:

[MEPRS Web Portal](#)
[MEWACS](#)
[MEPRS Manual DoD 6010.13-M](#)
[Human System Interface \(HSI\)](#)

MTF-Peer Group Lookup:

[Air Force](#)
[Army](#)
[Navy](#)



FY04/FY05 Pharmacy Dispensing Cost per Script - Medical Centers

| | | | Costs | Script | Z Score |
|------|------------------------|-----------|--------------|--------|---------|
| 0089 | WOMACK AMC-FT. BRAG | 1,021,255 | \$ 3,445,042 | \$3.37 | -1.78 |
| 0052 | TRIPLER AMC-FT SHAFTE | 661,161 | \$ 3,025,439 | \$4.58 | -0.97 |
| 0067 | NNMC BETHESDA | 640,728 | \$ 3,249,500 | \$5.07 | -0.64 |
| 0109 | BROOKE AMC-FT. SAM HC | 764,979 | \$ 3,960,212 | \$5.18 | -0.57 |
| 0073 | 81st MED GRP-KEESLER | 551,124 | \$ 2,856,371 | \$5.18 | -0.57 |
| 0095 | 74th MED GRP-WRIGHT-PA | 730,799 | \$ 3,829,162 | \$5.24 | -0.53 |
| 0108 | WILLIAM BEAUMONT AM | 538,620 | \$ 2,856,706 | \$5.30 | -0.49 |
| 0124 | NMC PORTSMOUTH | 1,449,458 | \$ 7,737,788 | \$5.34 | -0.46 |
| 0047 | EISENHOWER AMC-FT. GC | 700,647 | \$ 4,551,094 | \$6.50 | 0.31 |
| 0029 | NMC SAN DIEGO | 1,338,301 | \$ 9,580,241 | \$7.16 | 0.75 |
| 0117 | 59th MED WING-LACKLAN | 903,129 | \$ 6,751,300 | \$7.48 | 0.97 |
| 0037 | WALTER REED AMC-WAS | 599,174 | \$ 4,541,304 | \$7.58 | 1.04 |
| 0014 | 60th MED GRP-TRAVIS | 501,714 | \$ 3,950,786 | \$7.87 | 1.23 |
| 0125 | MADIGAN AMC-FT. LEWIS | 951,211 | \$ 8,164,987 | \$8.58 | 1.71 |

Summary Statistics

| Statistic | Raw Work | Rx \$ Less Supply Costs | Cost per Script |
|-----------|----------|----------------------------|--------------------|
| Mean | 810,879 | \$4,892,852 | \$6.03 |
| Median | 715,723 | \$3,955,499 | \$5.32 |
| SD | 292,529 | \$2,217,626 | \$1.50 |

| | |
|--|---|
| | Value nearest peer group mean |
| | MTFs within 1 Std. Deviation from the peer group mean |
| | 2 Std. Deviations above/below the peer group mean |
| | 3 Std. Deviations above/below the peer group mean |



Six Sigma MEPRS Management and Control Metrics
FY04 / FY05 S2M3 (Last Six Months of FY04 and First Six Months of FY05)
Standardized Executive Summary by Peer Group*

| DMIS ID | MTF Name | Standardized Average |
|------------------------|--------------------------------|----------------------|
| Medical Centers | | |
| 0109 | BROOKE AMC-FT. SAM HOUSTON | 0.60 |
| 0108 | WILLIAM BEAUMONT AMC-FT. BLISS | 0.57 |
| 0089 | WOMACK AMC-FT. BRAGG | 0.56 |
| 0052 | TRIPLER AMC-FT SHAFTER | 0.41 |
| 0124 | NMC PORTSMOUTH | 0.38 |
| 0029 | NMC SAN DIEGO | 0.38 |
| 0067 | NNMC BETHESDA | 0.06 |
| 0073 | 81st MED GRP-KEESLER | -0.02 |
| 0047 | EISENHOWER AMC-FT. GORDON | -0.03 |
| 0125 | MADIGAN AMC-FT. LEWIS | -0.11 |
| 0037 | WALTER REED AMC-WASHINGTON DC | -0.29 |
| 0117 | 59th MED WING-LACKLAND | -0.37 |
| 0095 | 74th MED GRP-WRIGHT-PATTERSON | -0.97 |
| 0014 | 60th MED GRP-TRAVIS | -1.15 |



Review

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Questions?

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